

# *OELs*

## *Is There a Future?*

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# *Presentation Highlights*

- Historical Evolution
- OEL Setting Processes Today
- Challenges
- Is There a Remedy?

# *Global Evolution*

- Pre 1900
- Early 1900s
- 1940s-1970s
- Post 1970s



# *Today's OEL Processes*

- US Environment
- European Union Environment

# *Today's OEL Processes*

## ■ US Environment

- 1927 Walsh Healey Act
- 1946 ACGIH
- 1971 OSHA
- 1971 NIOSH
- 1984 AIHA
- State Level Efforts

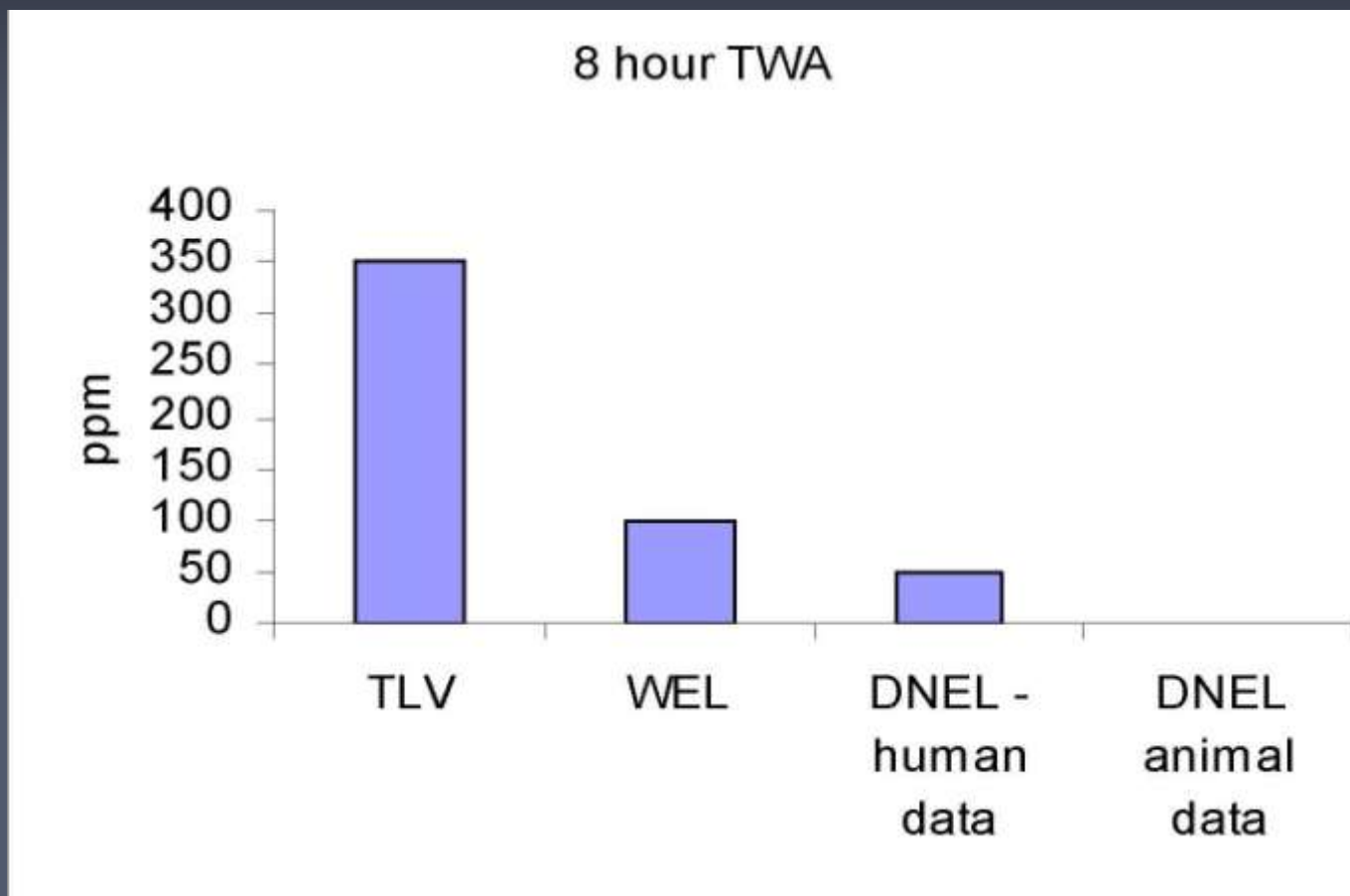
# *Today's OEL Processes*

- European Union
  - ACGIH TLVs a starting point
  - Individual country efforts
  - 2005 Control of Substances Hazardous to Health Regulations (COSHH)
  - 2007 REACH

# ***REACH***

- EU effort
- 2007 Regulation on Registration Evaluation & Control of Chemicals
- Prescribed DNELs
- Include health, environmental and physical safety risks
- Lower than traditional OELs

# *Derivation of DNEs: 1,1,1 Trichloroethane*



**Source:** Alison Searl, PhD, Director of Analytical Services, IOM Consulting, *Some Current Approaches to OEL Setting in the EU*, BOHS, Occupational Hygiene Conference, Thistle Hotel, Bristol, 2008.



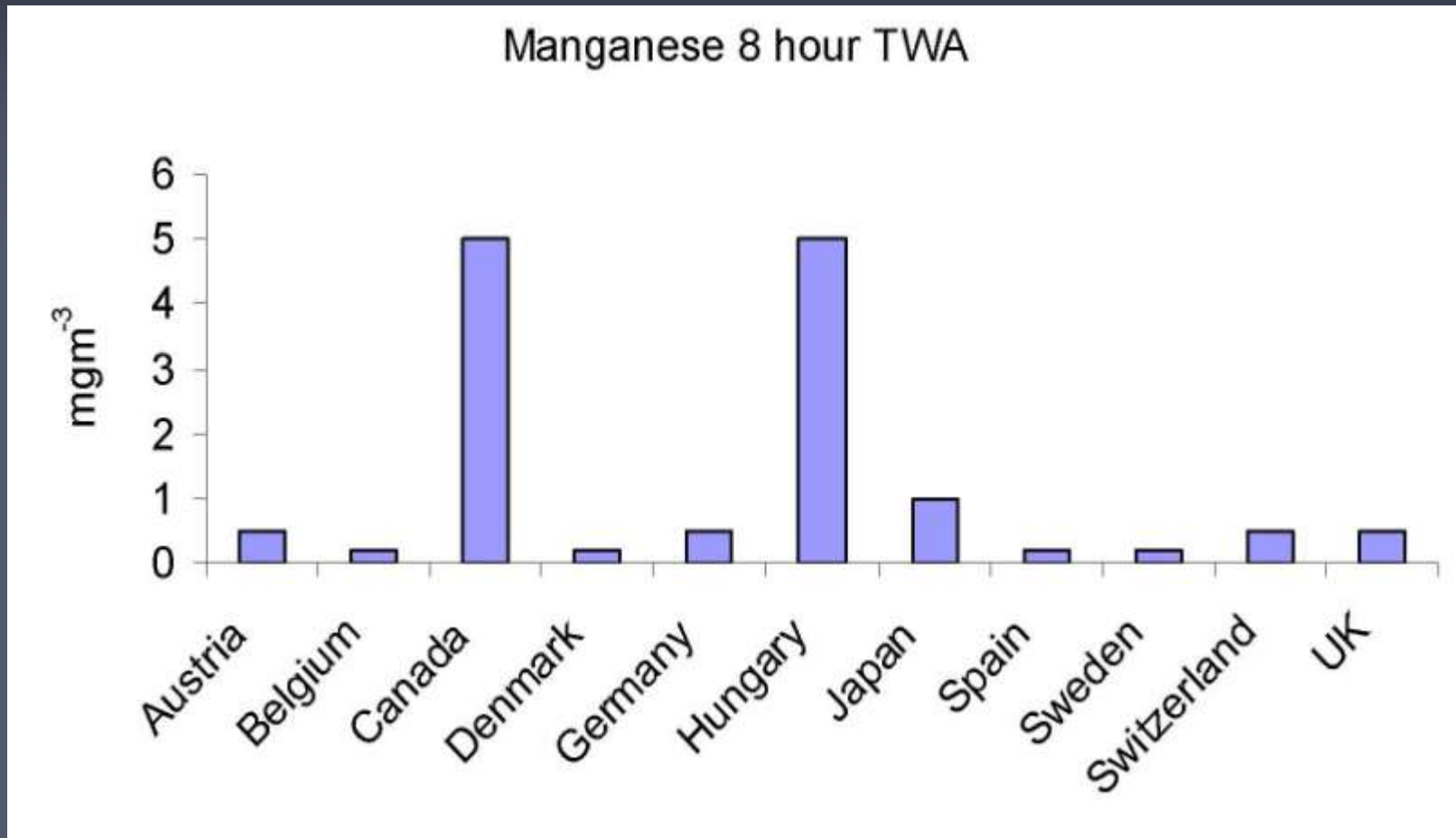
# *OEEL Global Challenges*

- Number of chemicals in commerce
- OEELs not well understood
- Emphasis--full cycle risks
- Not all value OEELs
- Basic data--quality & reliability
- Resources and expertise

# *OEEL Global Challenges*

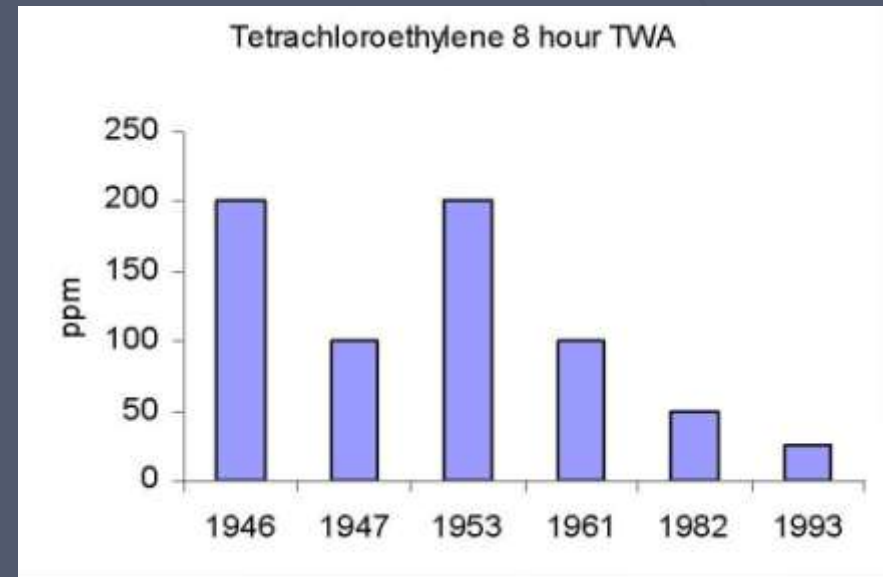
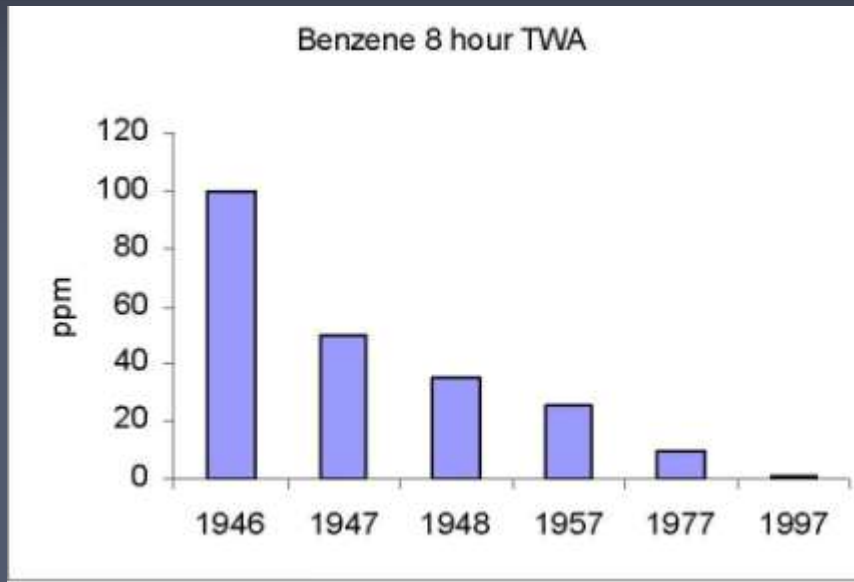
- Varied risk determination efforts, resulting exposure levels and protection levels
- Few direct measurement methods
- REACH--new playing field
- OEELs not true threshold of toxic risk, but acceptable risk.

# Various OELs for Manganese



**Source:** Alison Searl, PhD, Director of Analytical Services, IOM Consulting, *Some Current Approaches to OEL Setting in the EU*, BOHS, Occupational Hygiene Conference, Thistle Hotel, Bristol, 2008.

# ACGIH Threshold Limit Values



**Source:** Alison Searl, PhD, Director of Analytical Services, IOM Consulting, *Some Current Approaches to OEL Setting in the EU*, BOHS, Occupational Hygiene Conference, Thistle Hotel, Bristol, 2008.

# *Critical Few Questions*

- Do OELs have value today?
- Are there alternatives?
- Who should participate?

# *Do OELs Have Value?*

- Risk assessments
- Respirator selection
- Exposure priority setting
- Purchase decisions
- Control recommendations for product consumers

# *Global Alternative*

- **HARMONIZATION--**  
Making identical or minimizing differences between standards or related measures of similar scope

# *Reality # 1*

- Subjective Perception **born of different Personal Values may doom HARMONIZATION.**
- **HARMONIZATION** between different countries and cultures challenging.



## *Reality # 2*

- Common overarching value of protecting Human Health may allow for international **SHARING** of information documenting the exposure limits.

# *Reality # 3*

- Shared DATA will be critical to feeding the process.
- REACH may force sharing.

# *Who Should Participate?*

- Neutral 3<sup>rd</sup> party?
- International body?
- Role of U.S. organizations, federal or professional?

# *Advocates – Green Paper*

- Chuck Adkins, CIH
- Lindsay Booher, CIH, CSP
- Dwight Culver, MD, MS
- Tom Grumbles, CIH
- Michel Guillemin, PhD
- Frank Hearl, MS, PE
- John Henshaw, CIH
- Michael A. Jayjock, PhD CIH
- Chris Laszcz-Davis, MS, CIH, REA
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- Frank M. Parker, III, CIH, CSP, PE, DEE
- Jimmy L. Perkins, PhD, CIH
- Susan Ripple, MS, CIH
- Paul Schulte, PhD
- Robert D. Soule, EdD, CIH, CSP, PE

# *Topics – Green Paper*

- Historical Evolution of OELs
- OEL Setting Processes Today
  - US and EU
- OELs Are Critical to Industrial Hygiene and Risk Assessment
- Today's World Community Challenges
- Future Direction?

# *Excerpt*

“... we believe that Occupational Exposure Limits (OELs) are absolutely critical. We hope that this Paper will encourage our broad audience of stakeholders to discuss the critical issues, continue the dialogue and, as a call to action, help determine what the future for OELs should be. In working together, our profession can lead a way forward.”

# *Green Paper*

- Full paper available at [www.ioha.org](http://www.ioha.org)
- Summary--October 2009 Synergist
- 2009 Vancouver, BC PCIH
- 2010 Rome, Italy IOHA Conference  
with 27 member nations in attendance

**Thank You - Any Questions?**